

|                  |                        |
|------------------|------------------------|
| <b>GROUP:</b>    | ESB TAPE               |
| <b>CODE:</b>     | AT39, AT57, WT14, WT15 |
| <b>CATEGORY:</b> | TAPES                  |



| Code | Description                                            |
|------|--------------------------------------------------------|
| AT39 | 20MTRX200MMX2.5MM TILE TAPE (ESB NO2955101)            |
| AT57 | 20MTRX400MMX2.5MM TILE TAPE(ESB 2955103)               |
| WT14 | 250MM X 200MTR ESB ELECTRIC WARNING TAPE (ESB 2955090) |
| WT15 | 500MM X 200MTR ESB ELECTRIC WARNING TAPE( ESB 2955092) |





## Technical Data Sheet. Product: ESB tape.

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**This specification is designed to comply with the Energy Networks Technical Specification (ENATS) 12-23, Issue 3: 2013.**

The protection tape is used to warn for the presence of and to protect underground utility services (11kv-33kv and under). The protection tape is made up of a 150mm wide warning tape (made from 100% virgin polyethylene) which is then laminated to the surface of the base material (made from reconstituted polyethylene to which is added only those additives required to facilitate the required finish, strength, durability, colour and opacity).

| Property                                  | Specification                                                                                                                                                                                                                         | Test method / Compliance                  |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Length.                                   | As specified (+ / - 1m)                                                                                                                                                                                                               | Tape measure                              |
| Width - warning tape (pre-lamination)     | 150mm (+ / - 2mm)                                                                                                                                                                                                                     | Tape measure                              |
| Width - protection tape (post-lamination) | As specified (+ / - 2mm)                                                                                                                                                                                                              | Tape measure                              |
| Thickness - warning tape                  | 0.1mm (+ / - 0.015mm)                                                                                                                                                                                                                 | Digital vernier                           |
| Thickness - protection tape               | Minimum average of 2.5mm (min 2.35mm at any 1 point)                                                                                                                                                                                  | Digital vernier                           |
| Tensile Strength - warning tape           | Minimum 15 MN/m <sup>2</sup>                                                                                                                                                                                                          | BS EN ISO 527: 1996.                      |
| Tensile Strength - protection tape        | Minimum 10 MN/m <sup>2</sup>                                                                                                                                                                                                          |                                           |
| Elongation - warning tape                 | 400%                                                                                                                                                                                                                                  | BS EN ISO 527: 1996.                      |
| Elongation - protection tape              | 300%                                                                                                                                                                                                                                  | (specimen type 1A)                        |
| Density (warning & protection tapes)      | 910 to 935 kg/m <sup>3</sup> @ 20oC                                                                                                                                                                                                   | BS EN ISO 1183: 2004.                     |
| Melt Flow Index - warning tape            | 1.0 - 3.0 g/10mins (2.16kg)                                                                                                                                                                                                           | BS EN ISO 1133: 2005.                     |
| Melt Flow Index - protection tape         | 0.3 - 4.0 g/10mins (2.16kg)                                                                                                                                                                                                           |                                           |
| Colour.                                   | Red base, yellow tape and black lettering.                                                                                                                                                                                            | ENATS 12-23, Issue 2:2004, Section 9      |
| Written word and layout.                  | See Figure 1                                                                                                                                                                                                                          | ENATS 12-23, Issue 2:2004, Section 10     |
| Adhesion of printing                      | Printing durability - abrasion test.<br>Quality of printing - using Scotch tape no. 850 PUA                                                                                                                                           | ENATS 12-23, Issue 2:2004, Section 11.2   |
| Chemical Tests.                           | Background discolouration - stay within colour range.<br>Adhesion of Printing - No significant change.<br>No delamination between warning tape and base material.                                                                     | ENATS 12-23, Issue 2:2004, Section 12.2.2 |
| Packaging - protection tape.              | Coiled to suitable diameter and taped (printing on inside),<br>Weight of individual rolls are < 25kg,<br>Covered in black polyethylene film (for UV protection in storage).<br>Pallet amounts and dimensions determined by roll size. | ENATS 12-23, Issue 2:2004, Section 13     |
| Type Test / Routine .                     | Updated to bring values in line with                                                                                                                                                                                                  | ENATS 12-23, Issue 3:2013,                |
| Drawings.                                 | New drawings added, including updated layouts and dimensions<br><br>for warning and protection tapes.                                                                                                                                 |                                           |
| Warning Message .                         | 500 mm Width TapeWarning messages reduced from 6 to 4 across<br>the 500 mm width protection and warning tape:2 Irish-language<br>messages2 English-language messagesMessages facing opposite directions.                              |                                           |
| Plastic Cable Guards.                     | Plastic Cable Guards included, together with the corresponding drawing.                                                                                                                                                               |                                           |
| Plastic Marker Posts.                     | Plastic Marker Posts added, together with the corresponding drawing.                                                                                                                                                                  |                                           |

Figure 1  
Warning Tape Drawings

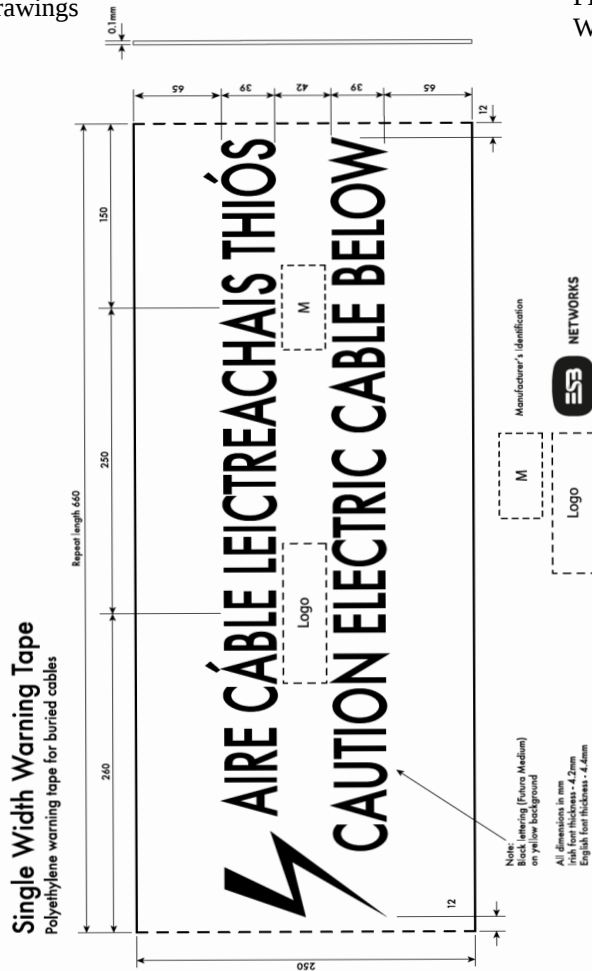


Figure 2  
Warning Tape Drawings

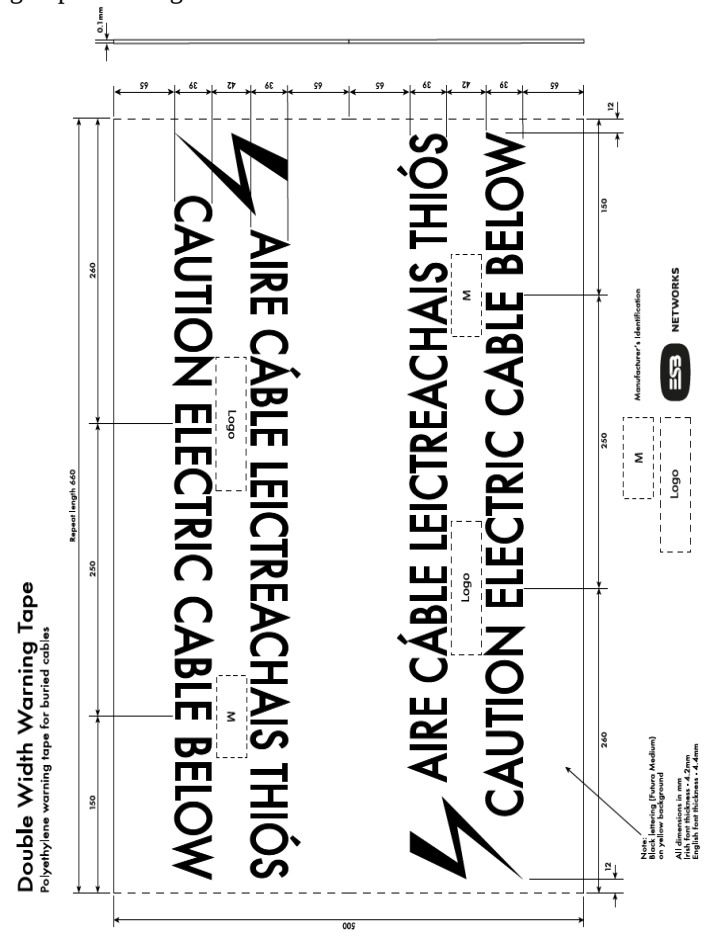


Figure 3  
Protection Tape Drawings

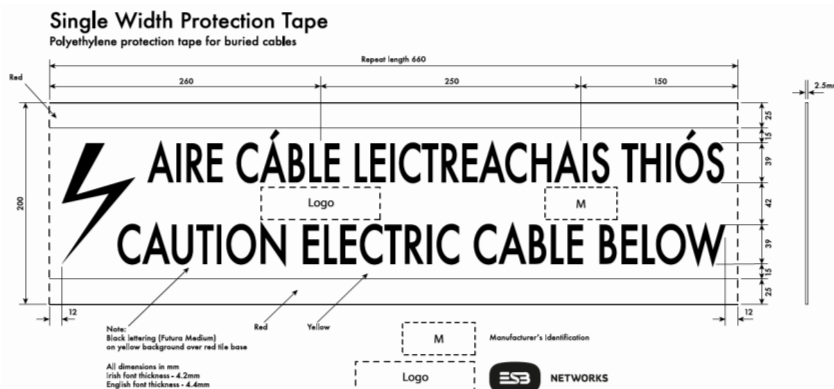


Figure 4  
Protection Tape Drawings



Manufacturers notes:ESBN UG Networks are satisfied as of todays date 4th April 2018, that ABC Abrasives are hereby an approved supplier of ESB Networks underground cable protection and warning tapes only as per current specification, "16001:Plastic Warning and Protection Tapes, Strips, Tiles and Concrete Marker Posts for HV, MV and LV Underground Cables and plastic cover for LV earth-wire".

The information given in this leaflet is true to the best of our knowledge and given in good faith. Users however must establish for themselves that the material is suitable for their specific purpose. No liability will be accepted for any loss or injury resulting from its use. The manufacturer's policy is one of continuous improvement and development. We reserve the right to change the specification without notice and at any time.